

being positioned in an essentially vertical position; and wherein the individual surface elements are configured and arranged such that the individual surface elements abut or overlap other surface elements seen in the direction of the shaft, whereby no space remains between the individual surface elements when the apparatus is viewed from above, and thus all atmospheric precipitation falling within the expanse of the apparatus, when the rotatable shaft is positioned vertically, essentially hits the surface elements and is thus able to settle in the form of ice.

22. (Twice Amended) An apparatus according to claim 21, including means for recording the measurement results for the thickness or mass of the ice deposited on the surface element(s), and means for visually or auditively emitting a signal to monitoring personnel about the measurement results.

REMARKS

By his Amendment the specification has been amended to better comply with U.S. patent practice and to refer to the predetermined surface areas 3a (see concurrently filed Letter Re Drawings), and claims 18 and 22 have been amended to overcome the examiner's formality rejections under 35 U.S.C. §112. Entry is requested.

In the outstanding Office Action the examiner has rejected claims 1-23 under 35 U.S.C. §103(a) as being unpatentable over Greenblatt et al. in view of Rasmussen et al.

The applicant asserts that this rejection is totally without merit.

Greenblatt et al. disclose a gauge for accurate measuring both liquid and frozen precipitation even in windy conditions, the gauge including a cylindrical support structure 12, a collector assembly 20 with cylinder 21 at the upper end of the support structure, a heating means 26 within the cylinder 21, and a reservoir 30 with bottom 24 supported by a weighing mechanism 50 within the support structure. The heating means 26 heats the inner surface of the collector assembly 20 so that frozen water (sleet, freezing rain or snow) which accumulates on the inner surface of the collector assembly melts. The reservoir 30 is suspended from the weighing mechanism 50 to permit the indication of increased weight of the reservoir as a result of accumulated precipitation. There is no means disclosed (or needed) for moving surface elements on which ice is intended to form through atmospheric air for a predetermined period of time.

Rasmussen et al. disclose a winter precipitation measuring system which includes a tube 105 containing a sensor electronics assembly 120 and a fan assembly 130, the sensor electronics assembly including a primary thermal plate 110 mounted above a sensor control housing 125 and a reference plate 111 extending downwardly of the housing 125. The amount of current supplied to the thermal plate 110 to maintain it at constant temperature provides a value of the precipitation rate of snow falling downwardly into the tube 105. The reference plate 111 does not rotate, nor does the primary thermal plate 110. Indeed, the only elements that rotate in the tube 105 are the fan blades 132, which create

a flow of air through the tube 105 to prevent heat plume above the entry orifice 106 of the tube 105 and to provide a uniform flow of air past the sensor electronics assembly 120 (see column 5, lines 21-30).

Thus, it is clear that no possible combination of Rasmussen et al. with Greenblatt et al. would provide an assembly for measuring supercooled liquid in atmospheric air wherein a surface on which ice is deposited is moved through the atmospheric air for a predetermined period of time. And there would be no reason to include a fan in the reservoir 30 of Greenblatt et al. since this reservoir has a solid floor and is not open.

The examiner's prior art rejection makes no sense and should be withdrawn.

Favorable reevaluation is requested.

Respectfully submitted,

DYKEMA GOSSETT PLLC



Richard H. Tushin
Registration No. 27,297
Third Floor West, Franklin Square
1300 I Street, N.W.
Washington, DC 20005-3353
(202) 906-8600

ID 44847

VERSION OF THE SPECIFICATION SHOWING CHANGES MADE THEREIN

Page 1, the paragraphs starting at line 3 and ending at line 10 has been amended as follows.

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to a method and an apparatus for local measurement of an icing factor for atmospheric air containing supercooled water.

THE PRIOR ART

[Such measurement] Measurements of icing factor are used in particular[-], but not exclusively[-], within the fields of aviation and navigation, wherein icing can [constitute] be a substantial safety hazard [when it comes to wrecking] and can be the cause of crashes.

Page 3, the paragraph starting at line 11 and ending at line 13 has been amended as follows.

[This has been achieved with the present invention by the method according to claim 1, or by use of an apparatus according to claim 7.]

SUMMARY OF THE INVENTION

Page 8, the paragraph that starts at line 25 and ends at line 33 has been amended as follows.

The apparatus according to the present invention is particularly suitable for use in airports[,], where the apparatus is preferably arranged at ground level [in an air port,] and whereby the apparatus [comprises] includes means for recording the measured results of the thickness or

mass of the ice deposited on the surface elements, and means for visually or auditively emitting a signal regarding the measurement results to the monitoring personnel of the airport.

BRIEF DESCRIPTION OF THE DRAWINGS

Page 9, the paragraph starting at line 31 and ending on page 10, line 5 has been amended as follows.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1 shows the constructive principles of an apparatus according to the invention, [said] the apparatus [comprising] including a housing or a frame 1[,] in which a shaft or a rotor 2 is arranged that supports two diametrically opposed surface elements 3 having predetermined surface areas 3a, the rotor and elements being rotated by a drive unit 4 in the direction of the arrow A. The rotor with one or more surface elements is also referred to as the rotor element.—

**VERSION OF THE CLAIMS SHOWING THE CHANGES MADE
THERETO**

18. (Twice Amended) An apparatus according to claim 17, [wherein the apparatus comprises] including a system of surface elements [(21,22,23,24)] mounted on a rotatable shaft [(2)] configured for being positioned in an essentially vertical position; and wherein the individual surface elements are configured and arranged such that the individual surface elements [, corresponding to their projection on a face perpendicular to the rotatable shaft, abuts on or overlaps] abut or overlap other surface elements seen in the direction of the shaft, whereby [it is accomplished that there is] no space remains between the individual surface elements when the apparatus is viewed from above, and thus all atmospheric precipitation falling within the expanse of the apparatus, when the rotatable shaft is positioned vertically, essentially hits the surface elements and is thus able to settle in the form of ice.

22. (Twice Amended) An apparatus according to claim 21, [wherein the apparatus is arranged at ground level in an airport; and that the apparatus comprises] including means for recording the measurement results for the thickness or mass of the ice deposited on the surface element(s), and means for visually or auditively emitting a signal to [the] monitoring personnel about the measurement [result] results.

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